

REMARKS

Favorable reconsideration of this application and the Office Action of June 9, 2004 are respectfully requested in view of the following remarks.

Claims 1 to 36 remain under consideration in this application.

The present invention relates to non-photosensitive polyimide precursor compositions that are soluble in *gamma*-butyrolactone and aqueous tetramethyl ammonium hydroxide and which have certain specified adhesion promoters (of formulae I through VI) that enable the compositions not to be degraded as to stability of the composition. The present applicants have discovered that only certain adhesion promoters enable one to obtain such essentially non-degradable, stable non-photosensitive polyimide precursor compositions that are soluble in *gamma*-butyrolactone and aqueous tetramethyl ammonium hydroxide and possess improved adhesion without degradation and instability, whereas other adhesion promoters are not able to provide such stable compositions and in fact lead to degradation (gelling) of such non-photosensitive polyimide precursor compositions that are soluble in *gamma*-butyrolactone and aqueous tetramethyl ammonium hydroxide. This unexpected discovery is illustrated in Applicants' specification, particularly in the inventive and the comparative examples in paragraphs [0069] and [0070] and particularly in the data in Table 3 at pages 39 and 40. This data clearly demonstrates the unobviousness of the present invention, and thereby the erroneousess of the USPTO's prior art obviousness rejection of the claims over the cited prior art for the reasons set forth hereinafter.

The rejection of claims 1-12, 14, 17-29, 31 and 34-34 under 35 U.S.C. 103 as being unpatentable over Yamashiki et al. (US 6,455,208 B1) in view of Matsuoka et al. (US 5,397,682) is respectfully traversed. It is respectfully submitted that a proper reading and understanding these reference disclosures demonstrates that their disclosures do not teach or render obvious the claimed invention.

It is agreed that Yamashiki et al. discloses polyamic acids within the scope of the claims. Applicants' do not contend that their polyamic acids are new, rather that the stable compositions thereof in *gamma*-butyrolactone, with the specific adhesion promoters of formulae I through VI, are new and unobvious. As the PTO correctly recognizes, Yamashiki et al. does not disclose compositions having present adhesion promoters. That is logical because, based on the state of the art, they were unaware of adhesion promoters that would provide stable compositions. Although the reference does not disclose the use of adhesion promoters, the PTO, on its own, suggests that use of them in Yamashiki et al.'s composition would be proper and suggest using one from the disclosure in Matsuoka et al. This PTO position is clearly hindsight based solely upon Applicants' invention. Nothing in Yamashiki et al. suggest that any adhesion promoter could be used, nor any one that could be used provide a stable composition, nor is there anything to lead that person to select a specific adhesion promoter from Matsuoka et al. Thus, this hindsight reconstruction of the art is erroneous and requires the rejection to be withdrawn.

Additionally, those skilled in this art know that the mere fact that certain compounds may function as acceptable adhesion promoters in one type of composition does not provide any basis to believe that they would be acceptable in different, even though somewhat similar, compositions. While Matsuoka et al. does disclose certain compounds as useful adhesion promoters in a certain type of composition. However, the compositions of Matsuoka et al. are not polyamic compositions as required by the present invention. The compositions of Matsuoka et al. are relatively non-polar polyamic acid **ester** compositions, not the relatively polar polyamic acid compositions. There is no basis for believing that the adhesion promoters useful in relatively non-polar compositions would also be similarly successfully useful in the relatively polar polyamic acid compositions of this invention. Thus, this illustrates a further error in the USPTO attempt to link the two disclosure without a proper teaching to do so.

Therefore, it is respectfully submitted that these reasons clearly demonstrate the deficiencies and erroneousousness of this rejection and the USPTO is respectfully requested too reconsider and withdraw this rejection of claims 1-12, 14, 17-29, 31 and 34-36.

The deficiencies in the prior discussed rejection also are applicable to the two other obviousness prior art rejections of the remaining claims since the rejections of those other claims are also predicated upon the disclosures in Yamashiki et al. and Matsuoka et al. as primary reference and upon the USPTO's erroneous use thereof for the reasons already stated. Thus, the prior art obviousness rejections of claims 13, 15, 16, 30, 32 and 33 are erroneous and their withdrawal is also respectfully requested.

Additionally, the obviousness rejection of claims 13 and 30 over Yashika et al. in view of Matsuoka et al., further in view of Durham et al. (US 5,876,897) is erroneous for at least the following additional reasons. It is the erroneous position of the USPTO that since Durham et al. shows the equivalent use of 2-heptanone and PGMEA for certain **photosensitive photoresists**, that the two solvents are equivalent under all conditions of use and are interchangeable. Those skilled in the relevant art know that this type of logic is erroneous and finds no basis in fact. Solubility requirements are quite different depending on a variety of factors, such as, molecular weight, polarity and the presence of other functional groups in the polymers being dissolved. Thus, the USPTO's equating of 2-heptanone and PGMEA is without a proper teaching and has no basis in fact in the reference disclosures. Therefore, for this additional reason, the USPTO is requested to reconsider and withdraw this rejection of claims 13 and 30.

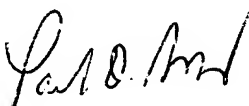
Claims 15, 16, 32 and 32 are also erroneously rejected for obviousness under 35 U.S.C. 103 by the USPTO over Yamashiki et al. in view of Matsuoka et al., further in view of Mahdi et al. (US 2002/0100550 A1) for the following additional reasons.

Mahdi et al. is cited by the USPTO to show the equivalence of 3-methacryloxypropyltrimethoxysilane with phenylaminopropyltrimethoxysilane. The only basis for this is the mere fact that they are both mentioned in the Mahdi et al. application disclosure. However, the fact that they both work under the conditions in the cited application is not a basis for contending that they are equivalent in a different environment, i.e., in the compositions of the present invention. In fact, the data in the present invention shows that

that USPTO conclusion of equivalence is erroneous when attempted to be applied to the compositions of the present invention. By the logic of the USPTO any of the adhesion promoters of Mahdi et al. would be expected to perform equivalently in any environment and particularly in the environment of Applicants' claims. However, as the data in Applicants' comparative examples 9 and 11 (paragraphs [0069] and [0070]) shows this is not the case. This data shows that one can not merely pull any adhesion promoter out of the hat (including all those in table 6 of Mahdi et al.) and expect that they will perform in the compositions of this invention to produce the stable compositions required. Comparative examples 9 and 11 show that such is not the case and that there is no basis for obviousness as erroneously contended by the USPTO. For this additionally reason the USPTO is respectfully requested to reconsider and withdraw this prior art rejection of claims 15, 16, 32 and 33.

It is respectfully submitted that the foregoing is a full and complete response to the Office Action and that all the claims are allowable for at least the reasons indicated. An early indication of their allowability by issuance of a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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